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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/606,284

06/25/2003

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944-003.151-1

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07/31/2008

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EXAMINER

YUN, EUGENE

ART UNIT

PAPER NUMBER

2618

MAIL DATE

DELIVERY MODE

07/31/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/606,284	<b>Applicant(s)</b> SEPPINEN ET AL.	
	<b>Examiner</b> EUGENE YUN	<b>Art Unit</b> 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/12/2008 has been entered.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bridgelall (US 6,717,516) in view of Gunnarsson (WO 01/39103).

Referring to Claim 1, Bridgelall teaches a dual mode transceiver, comprising:

At least one mixer; and

A controller configured to adapt the transceiver to operate in two modes operating either as a radio frequency (RF) tag reader 44 (fig. 2) or as a Bluetooth transceiver 42 (fig. 2) by changing its reception and transmission capabilities of the transceiver (see col. 5, lines 1-15).

Bridgelall does not teach controlling the at least one mixer to operate in both of the two modes, wherein the at least one mixer is usable for said transceiver operating as said RF tag reader or said Bluetooth transceiver. Gunnarsson teaches controlling the at least one mixer to operate in both of the two modes (see mixer 27 of fig. 2 and pg. 5, lines 22-26 (RFID) as well as pg. 6, lines 4-7 (BT)) wherein the at least one mixer is usable for said transceiver operating as said RF tag reader or said Bluetooth transceiver (see pg. 5, lines 22-26 (RFID) as well as pg. 6, lines 4-7 (BT)). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teachings of Gunnarsson to said device of Bridgelall in order to reduce the cost and hassle of carrying two separate devices.

Referring to Claim 2, Bridgelall also teaches said Bluetooth transceiver is useable as a transceiver for a 2.4 gigahertz industrial, scientific and medical band radio frequency tag reader system (see col. 5, lines 1-15).

Referring to Claim 3, Bridgelall also teaches an integrated circuit (see 58 in fig. 2).

Referring to Claim 4, Bridgelall also teaches a mobile terminal (fig. 1).

Referring to Claim 5, Bridgelall teaches a radio device having a radio receiver and a radio transmitter wherein operability of said device is in two modes (see col. 5, lines 1-15), wherein said device is configured to operate in a Bluetooth mode 42 (fig. 2) and a radio frequency (RF) tag reader mode 44 (fig. 2), said radio receiver and said radio transmitter comprising a single transceiver that is operable as a Bluetooth

transceiver in said Bluetooth mode and an RF tag reader in said RF tag reader mode by control of its reception and transmission capabilities (see col. 5, lines 1-15).

Bridgelall does not teach using a single antenna in an RF tag reader mode or Bluetooth mode by control of at least one mixer of said receiver and of said transmitter to operate said at least one mixer in both of the two modes. Gunnarsson teaches using a single antenna in an RF tag reader mode or Bluetooth mode (see pg. 5, lines 4-10 where the antenna is 25 in fig. 2) by control of at least one mixer of said receiver and of said transmitter to operate said at least one mixer in both of the two modes (see mixer 27 of fig. 2 and pg. 5, lines 22-26 (RFID) as well as pg. 6, lines 4-7 (BT)). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teachings of Gunnarsson to said device of Bridgelall in order to reduce the cost and hassle of carrying two separate devices.

Referring to Claim 6, Bridgelall also teaches said operability of said radio device in either mode is by using said radio receiver and said radio transmitter (see col. 5, lines 1-15).

Referring to Claim 7, Bridgelall also teaches said radio device incorporated in a device having additional device functionality (see col. 5, lines 29-46).

Referring to Claim 8, Bridgelall also teaches the device in which said radio device is incorporated comprising a mobile telephone (see 24, 26, and 28 in fig. 1).

Referring to Claim 9, Bridgelall also teaches said radio device installed in a mobile telephone (see 24, 26, and 28 in fig. 1).

Referring to Claim 10, Bridgelall teaches an apparatus comprising a radio receiver 38 and 34 (fig. 2), a radio transmitter 38 and 34 (fig. 2), and a signal processor 50 (fig. 2), wherein the radio receiver is responsive to an incoming analog radio signal for providing a down converted and modulated signal to said signal processor, wherein the radio transmitter is responsive to an output signal from said signal processor for transmission as an outgoing analog radio signal (see col. 6, lines 37-60), said apparatus further comprising a controller for controlling said apparatus in two modes, a first mode for operating as a Bluetooth device and a second mode for operating as a radio frequency (RF) tag reader (see col. 6, lines 60-67 and col. 7, lines 1-3), wherein said radio receiver and said radio transmitter comprises a single transceiver that is configured to operate as an RF tag reader or as a Bluetooth transceiver (see col. 5, lines 1-15).

Bridgelall does not teach a single antenna usable for said transceiver operating as said RF tag reader or said Bluetooth transceiver by controlling at least one mixer of both said receiver and said transmitter to operate in both the first mode and the second mode. Gunnarsson teaches a single antenna usable for said transceiver operating as said RF tag reader or said Bluetooth transceiver (see pg. 5, lines 4-10 where the antenna is 25 in fig. 2) by controlling at least one mixer of both said receiver and said transmitter to operate in both the first mode and the second mode (see mixer 27 of fig. 2 and pg. 5, lines 22-26 (RFID) as well as pg. 6, lines 4-7 (BT)). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to

provide the teachings of Gunnarsson to said device of Bridgelall in order to reduce the cost and hassle of carrying two separate devices.

Referring to Claim 11, Bridgelall teaches a control for controlling a radio device in two modes, a first mode for operating as a Bluetooth transceiver 42 (fig. 2) and a second mode to operating as a radio frequency (RF) tag reader 44 (fig. 2) wherein said radio device comprises a single transceiver controlled by said control to operate as said RF tag reader or as said Bluetooth transceiver by changing its reception and transmission capabilities (see col. 5, lines 1-15).

Bridgelall does not teach controlling at least one mixer to operate both in the first mode operating as a mixer for the radio device operating as said Bluetooth transceiver and in the second mode operating as a mixer for the radio device operating as said radio frequency tag reader. Gunnarsson teaches a single antenna usable for said transceiver operating as said RF tag reader or said Bluetooth transceiver (see mixer 27 of fig. 2 and pg. 5, lines 22-26 (RFID) as well as pg. 6, lines 4-7 (BT)). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teachings of Gunnarsson to said device of Bridgelall in order to reduce the cost and hassle of carrying two separate devices.

Referring to Claim 12, Bridgelall also teaches means for communicating with a radio access network over a radio interface (see 214 of fig. 4).

Referring to Claim 13, Bridgelall also teaches a signal processor 50 (fig. 2) and a mobile telephone transceiver 28 (fig. 1).

Referring to Claim 14, Bridgelall teaches a method comprising:

Switching a mode of a single transceiver able to operate as a radio frequency (RF) tag reader 44 (fig. 2) in one mode and as a Bluetooth transceiver 42 (fig. 2) in another mode (see col. 5, lines 1-15).

Bridgelall does not teach a single antenna usable for said transceiver operating as said RF tag reader or said Bluetooth transceiver and adapting at least one mixer of said single transceiver to operate in both modes. Gunnarsson a single antenna usable for said transceiver operating as said RF tag reader or said Bluetooth transceiver (see pg. 5, lines 4-10 where the antenna is 25 in fig. 2) and adapting at least one mixer of said single transceiver to operate in both modes (see pg. 5, lines 22-26). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teachings of Gunnarsson to said device of Bridgelall in order to reduce the cost and hassle of carrying two separate devices.

Referring to Claim 15, Bridgelall also teaches said single transceiver is both for interrogating an RF tag and for participating in a Bluetooth piconet (see col. 5, lines 1-15).

Referring to Claim 16, Bridgelall also teaches a single transceiver and single antenna for use in a mobile telephone 28 (fig. 1) and operating a mobile telephone transceiver of said mobile telephone over a radio interface to a radio access network (see 214 of fig. 4).

Referring to Claim 17, Gunnarsson also teaches a single antenna is useable for said transceiver operating as said radio frequency tag reader or as said Bluetooth transceiver (see pg. 5, lines 4-10 where the antenna is 25 in fig. 2).



Referring to Claim 18, Gunnarsson also teaches said single transceiver is configured to operate with a single antenna when operating as said radio frequency tag reader or as said Bluetooth transceiver (see pg. 5, lines 4-10 where the antenna is 25 in fig. 2).

Referring to Claim 19, Gunnarsson also teaches said controller is configured to control the at least one mixer to operate with a different gain and bias current according to mode of operation as a radio frequency tag reader or as a Bluetooth transceiver (see pg. 5, line 22 to pg. 6, line 7).

Referring to Claim 20, Gunnarsson also teaches said controller is configured to control the at least one mixer to operate with a different gain and bias current in said first mode than in said second mode (see pg. 5, line 22 to pg. 6, line 7).

Referring to Claim 21, Gunnarsson also teaches said control is configured to control the at least one mixer to operate with a different gain and bias current in said first mode than in said second mode (see pg. 5, line 22 to pg. 6, line 7).

Referring to Claim 22, Gunnarsson also teaches said adapting said at least one mixer of said single transceiver to operate in both modes comprises adapting a first selected gain and bias current in said one mode and a second selected gain and bias current in said other mode (see pg. 5, line 22 to pg. 6, line 7).

### ***Response to Arguments***

4. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

5. Applicant's arguments filed 5/12/2008 have been fully considered but they are not persuasive.

The applicant argues that the cited references do not teach that the same mixer is operated in both operation modes (Bluetooth and RFID). However, neither does the claims. Nowhere in the claims does it specifically state that the **same** mixer operates in both operation modes. As a matter of fact, the claims state that "at least one mixer" operates in both operation modes. This means that the claims can be read on to state that two different mixers operate in two different operation modes and therefore, this contradicts the applicant's arguments.

In addition, the claims do not state that the mixer must be integrated into the Bluetooth radio.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to EUGENE YUN whose telephone number is (571)272-7860. The examiner can normally be reached on 9:00am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew D. Anderson can be reached on (571)272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2618

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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